Retail Vibrancy and the Composition of British High Streets

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Summary

This abstract addresses one element of the Consumer Data Research Centre's work exploring the vibrancy of retail areas in Britain. In this case the term 'retail vibrancy' encompasses the economic, social and community-developmental health of high streets. Specifically, the research will detail the creation of a database to encapsulate the prevailing demographic characteristics of high streets in order to explore their relationships to high street store turnover, footfall, and vacancy rate.

KEYWORDS: Retail Vibrancy, demographic composition, high streets

1. Introduction

UK high streets face a consistently volatile and challenging socio-economic environment triggered by the 2008 recession, high business rates and competition from online retailers. Whilst the high street is in decline, the breadth and volume of data available for capturing information about those who shop there has never been greater (Hall, 2011). In addition geospatial research such as the work of Dolega et al. (2016) and Vaughan et al. (2018), has displayed the effectiveness of using geographical representation for consumer data in this context. Previous studies that have focussed on demographic composition of high streets and their catchment areas have focused on the spatial analysis of businesses composition and clusters or resources available to specific demographic groups (Vaughan et al. 2018; Ruggs et al. 2015; Wrigley and Lambiri 2015). Yet, vibrancy as a measurement or tool for development, which combines both store composition and demographics, remains under-researched.

This work is particularly timely given the that there are multiple local government schemes and initiatives focusing on creative place making, improved vibrancy and regeneration to help reverse the fortunes of the high street in Britain (Forman and Creighton, 2012). The vague interpretations of 'vibrancy' arguably leave the term open to debate (sounds weird), with different disciplines offering an insight into how the concept can be conceived. In this piece of research, footfall, vacancy rate and retail store turn-over data will be utilized as a possible tool to identify other factors which may determine retail vibrancy.

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2. Research Design

The research will investigate whether there is a relationship between demographic, economic and social factors within retail convenience catchments with the vacancy rates and retail store turn-over of associated high street areas. An assessment can then be made as to whether retail catchments with particular compositions are symptomatic of retail areas in decline. In order to conduct this piece of research, Dolega et al.'s (2016) retail convenience catchments have been used to distinguish between different retail areas. The retail catchments pertain to the maximum likely area for corresponding retail centres in relation to their size. The catchment areas were calculated through defining the shortest road network distance between centroids of Great Britain's Output Areas and retail units.

As an initial examination of the retail catchments, a comparison of the aggregate demographic, social and economic qualities will be made in relation to each individual retail convenience catchment area.

2.1 Data

This research requires the combination of a large amount of demographic, socio-economic and consumer data, spanning across the whole of the UK. For example, we have used the 2011 Census Data to determine the demographic composition of Dolega et al.'s (2016) retail convenience catchments. Due to multiple convenience catchments overlapping, the centroids of the 2011 Output Area Classifications were calculated in order to select which convenience catchment each is situated in.

In order to investigate the possible impact of demographic and socio-economic factors on UK high streets, a number of different data sources and variables have been used. To be able to research a possible measure of retail vibrancy, multiple data sets have been studied throughout this paper. Firstly, 2014 data concerning the vacancy rates of retail centres have been sourced through the Consumer Data Research Centre (CDRC). Subsequently, measures of retail store turnover have been devised from data provided by the Local Data Company (LDC).

Literature in the disciplines of Business and Geography are yet to produce a cohesive and accepted definition of 'High Streets'. Therefore, we have constructed high street boundaries based on cross-referencing the Consumer Data Research Centre's 2017 Retail Centre Centroids and the retail cores outlined in the DCLG State of the Cities Report (2006).

2.2 Method

We have developed a database comprising averages of each demographic, socio-economic and consumer based factors analysed for each of Dolega et al.'s (2016) 3,413 retail convenience catchments. Consequently, information for each of the 2011 Output Area Classification located inside each convenience catchment is easily obtainable. Additional variables within the database have been selected as a result of an in-depth exploration of a range of literature related to retail vibrancy and regeneration. **Table 1** displays the contents of the database.

Variable	Data	Data Source	Literature
Demographic:			
Age	Age structure (2011)	Census Data	Wrigley and Lambiri (2015)
Gender	Gender Ratio (2011)	Census Data	
Ethnic Diversity Index	Ethnicity Categories (2011)	Census Data	Hall (2011)
Economic:			
UK House Prices	Median Price Paid (2017-18)	CDRC	Stroebel and Vavra, J (2019)
Vacancy Rates	Vacancy Proportions in Retail Centers (2014)	CDRC	The Portas Review (2011)
Footfall	Retail Footfall Censors (2015-present)	LDC	Millington (2017)
Premises Classification	Retail Centre Typology (2018)	CDRC	Pinkerton et al. (1995)
Store Turnover	Store Opening and Closures (2017-present)	LDC	Nase et al. (2013)
Sales	Family Restaurant (36), Fast Food Retailer (11), Leisure Operator (10), Sports Retailer (4), (2017-present)	LDC	Simons et al. (2018)
Socio-Economic:			
Multiple Deprivation Index	Indices of Deprivation (2015, 2016)	CDRC	Clarke et al. (2012)
Public Transport	National Public Transport Access Nodes (NaPTAN) (2014)	Department for Transport	Park et al. (2012)
Traffic	Average Annual Daily Flow (AADF)- major and minor roads.	Department for Transport	Findlay and Sparks (2009)
Access to Health Assets and Hazards	Retail Environment, Health Services, Physical Environment and Air Quality (2017)	CDRC	Townshend (2017)
Classification of High Streets	Population Density and Urban/Rural Classification (2011)	CDRC	Powe (2006)
Social: Community assets: eg. Libraries, Schools and Community Spaces.	Community Asset Locations (2016)	Government Data	Beaulieu (2002)
Active Places	Active Places Site Data (2019)	Sport England	Preston City Council (2019)

Table 1 Retail Vibrancy Database and associated literature review content. LDC is the Local Data Company, CDRC is the Consumer Data Research Centre.

As part of the database, the high street polygons were used to select the corresponding retail convenience catchments and in turn used as a basis to aggregate data for each catchment area. For the purpose of this abstract, Worthing (High turnover), Woking (average turnover) and Halifax (low turnover) have been extracted and three variables, Ethnic Diversity Index, gender and age are displayed below.

These three towns have been selected due to their differing turnover Location Quotients (LQ), calculated from the Local Data Company's retail unit data. The calculation consists of measuring the total number of recordings from Quarter 1, 2017 to Quarter 1, 2020 and comparing them to the number of instances where a premises has changed from one shop category type to another (including the status 'Vacant'). The proportion of change for the major towns and cities was then compared to national average. Worthing has the highest LQ, Woking was the closest to the national average and Halifax had the lowest propensity for turnover. The census data was used to obtain figures for gender composition, age and ethnic diversity. An Ethnic Diversity Index is calculated using the ethnic fractionalisation equation used in Fearon's (2003) research.

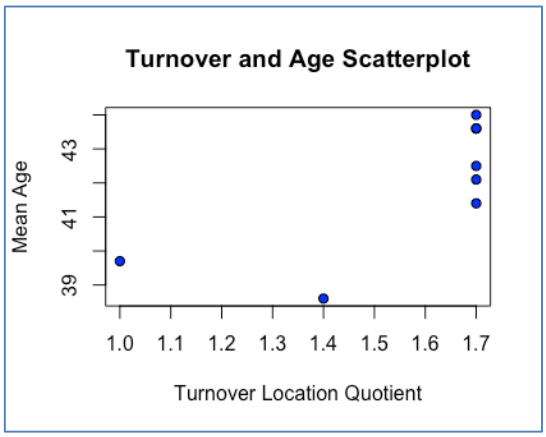
High Street	Turnover Location Quotient	Percentage of Premises Vacant	Catchment Area	Ethnic Diversity Index	Mean Number of Females	Mean Number of Males	Mean Age
Worthing	1.7	10.5	TC0838	0.270	947	894	44.0
			TC1494	0.207	879	832	42.1
			TC1853	0.193	893	830	43.6
			TC0835	0.172	858	802	43.6
			TC0839	0.225	894	847	41.4
			TC0836	0.198	890	833	42.5
Woking	1.0	1.4	TC1087	0.368	848	852	39.7
Halifax	0.4	0.6	TC0489	0.253	881	870	38.1

Table 2 Descriptive statistics of Worthing, Woking and Halifax retail convenience catchments.

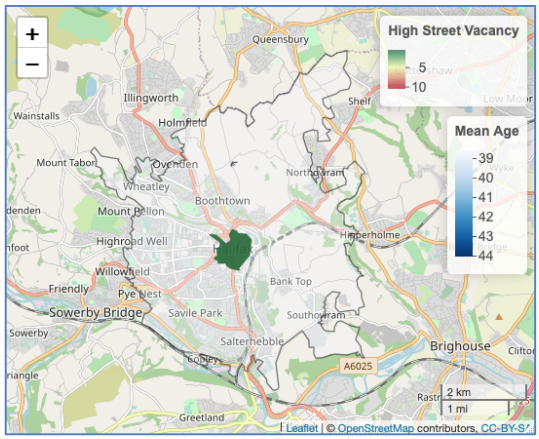
3. Results

Following the formation of the database, this research maps the retail vibrancy demographic variables, alongside vacancy and turn-over data across the whole of the UK. A case study of the three towns: Worthing, Woking and Halifax are displayed in **Figure 1**. The map exhibits the high street boundaries, percentage of premises vacant at the retail centre of each town and the distribution of mean ages, across each retail convenience catchments. As shown in **Figure 1,** the retail convenience catchments for Worthing have a somewhat higher average age than those of Halifax and Woking, as well as a substantially higher percentage of retail premises vacant.

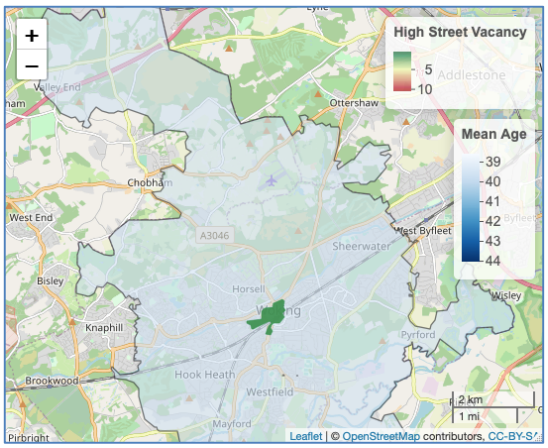
Average Age within Retail Convenience Catchments



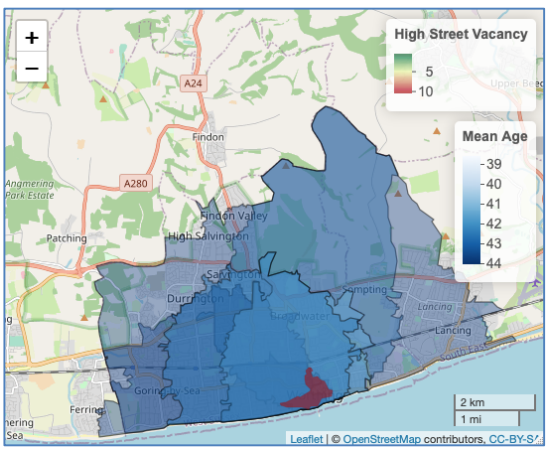
Halifax, Woking, Worthing



Halifax



Woking

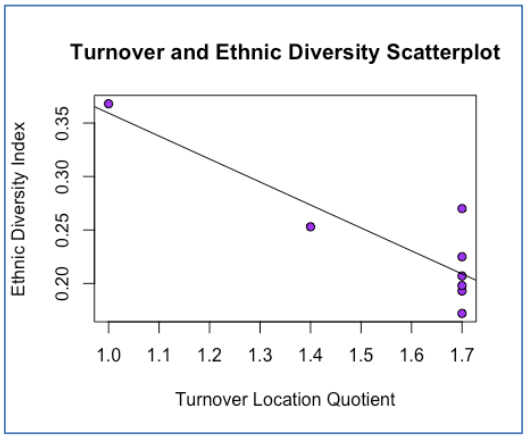


Worthing

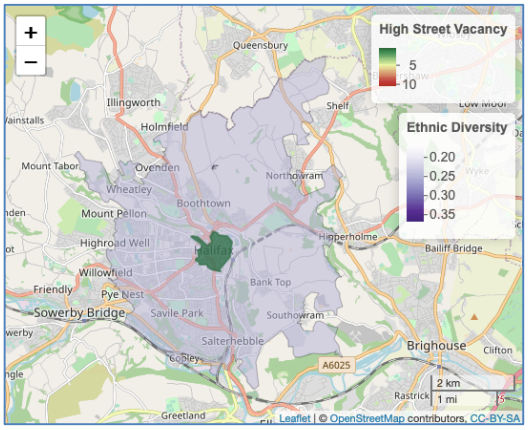
Figure 1 High Street boundaries of Worthing, Woking and Halifax. Percentage of premises vacant within retail centres. Mean age within Retail Convenience Catchments.

Figure 2 shows a distinct pattern across the retail convenience catchments for ethnicity. Worthing's catchments can be seen to contain a less ethnically diverse population.

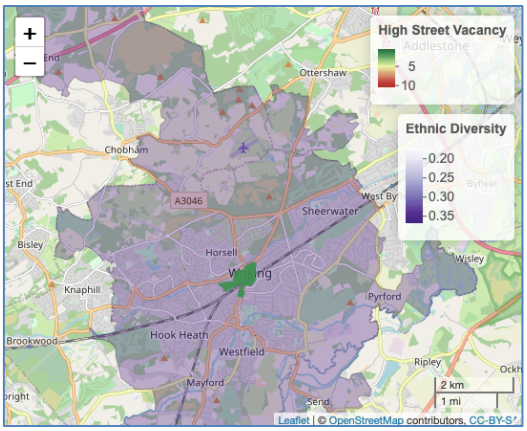
Ethnic Diversity within Retail Convenience Catchments



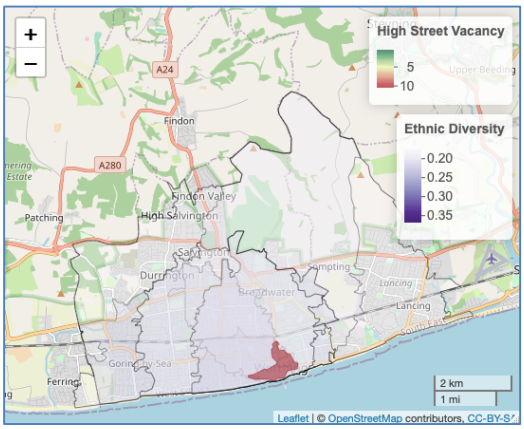
Halifax, Woking, Worthing



Halifax



Woking



Worthing

Figure 2 High Street boundaries of Halifax, Woking, Worthing. Percentage of premises vacant within retail centres. Ethnic Diversity Index value within Retail Convenience Catchments.

4. Discussion

This research has spatially defined and displayed the UK's high streets. The presentation of factors associated with retail vibrancy within retail convenience catchment areas shows that catchments allotted to different high streets can have a distinctively different composition of consumers, economic and social conditions compared to other areas. For example, in **Table 1** the retail catchment for Worthing can be seen to be considerably less ethnically diverse than the catchments for Woking. The retail vibrancy and catchment analysis this research undertakes can be used to create a depiction of high street users, localised to specific UK towns and cities. Retail vibrancy sub-factor information can then be cross referenced with the current success of the high street using measures including vacancy rates and retail store turn-over. The research can be utilised to assess the efficiency of UK high streets to cater for the population and social, cultural and economic conditions within its convenience catchments. Recommendations for those high streets with high vacancy rates may then be made. Specifically, decision making can be based on providing services and retail spaces which accommodate the area-specific population.

The future research objectives of this project will be further expansion in terms of validity and generalizability testing. Regression analysis will aid an exploration of the relationship between retail store turn-over and vacancy rates with the vibrancy characteristics of the retail convenience catchments. These analytical techniques will test for the validity of the relationship between variables associated with the high streets, which are being displayed spatially. The final outcome of this research project will be a comprehensive measurement tool for retail vibrancy which can be mapped and monitored across the whole of the UK.

5. Acknowledgements

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Biography

Abigail Hill is a PhD student in Human Geography at University College London. Her research focuses on the spatio-temporal dynamics of the UK's high street retail industry.